

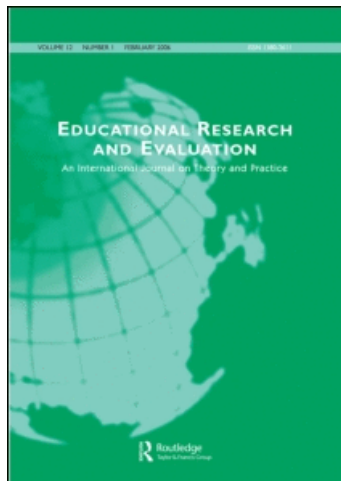
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From School Effectiveness and School Improvement to Effective School Improvement: Background, Theoretical Analysis, and Outline of the Empirical Study*

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ABSTRACT

School effectiveness and school improvement have different origins: school effectiveness is more directed to finding out “what works” in education and “why”; school improvement is practice and policy oriented and intended to change education in the desired direction. That means that in the orientation on the outcomes, input, processes, and context in education, school effectiveness and school improvement also have much in common. In the project Effective School Improvement (ESI), the merger of the 2 traditions has been pursued. In the theoretical part different orientations have been analysed and combined in a model for effective school improvement. Based on this analysis the framework is developed for the analysis of the case studies on school improvement projects in the participating countries.

THE LINKAGE BETWEEN SCHOOL EFFECTIVENESS AND SCHOOL IMPROVEMENT

From the beginning, the major aim of the school effectiveness movement was to link theory and research related to educational effectiveness to the improvement of education. School effectiveness has its roots in research and

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theory (e.g., Brookover, Beady, Flood, & Schweitzer, 1979; Rutter, Maughan, Mortimore, & Ouston, 1979), but also in educational practice and policy making (Edmonds, 1979). School effectiveness research has attempted to find the factors of effective education that could be introduced or changed in education through school improvement. The relatively short history of school effectiveness and improvement shows some successes of the linking between effectiveness and improvement. In many countries, there are links made between school effectiveness and educational policy. As a matter of mandate in the United States, the Hawkins Stafford Amendment resulted in up to a half of school districts directly using school effectiveness knowledge and concepts. Skepticism, however, has been expressed about the possibilities of a merger between school effectiveness and school improvement. Creemers and Reezigt (1997) argue that there are intrinsic differences between the school effectiveness tradition, which in the end is a programme for research with its focus on theory and explanation, and the school improvement tradition, a programme for innovation focusing on change and problem solving in educational practice. Nevertheless, they and others (e.g., Reynolds, Hopkins, & Stoll, 1993) advocate further linkage between school effectiveness and school improvement, for mutual benefit. School effectiveness research and theory can provide insights and knowledge to be used in school improvement. School improvement is in this way a very powerful tool for the testing of theories. School improvement can also provide new insights and new possibilities for effective school factors, which can be analysed further in effective school research. In recent years, there are examples of further productive co-operation between school effectiveness and school improvement, in which new ways of merging between the two traditions/orientations are attempted (Gray et al., 1999; MacBeath & Mortimore, 2001; Reynolds & Stoll, 1996; Stoll & Fink, 1992, 1994, 1996; Stoll, Reynolds, Creemers, & Hopkins, 1996; for an overview see Teddlie, Reynolds, Hopkins, & Stringfield, 2000).

The project *Capacity for Change and Adaptation in the Case of Effective School Improvement* (ESI), funded by the European Commission in the Fourth Framework Programme, was designed to investigate the relation between effectiveness and improvement in order to increase the possibility for schools to improve education. Drawing on Hopkins, Ainscow, and West's (1994) definition of improvement, the concept of effective school improvement is defined as follows: effective school improvement refers to planned educational change that enhances student learning outcomes as well as the school's capacity for managing change. The addition of the term "managing" emphasises the

processes and activities that have to be carried out in school in order to achieve change/improvement.

To evaluate effective school improvement, an *effectiveness criterion* is needed (does the school achieve better student outcomes?) as well as an *improvement criterion* (does the school manage to change successfully from old to new conditions that are necessary for effectiveness?) (Hoeben, 1998).

The project consists of two related research tasks, namely:

1. The analysis, evaluation, and synthesis of theories that might be useful for effective school improvement.
2. The inventory, analysis, and evaluation of effective school improvement programmes in different European countries.

The final objective of the project is to develop a strategy for school improvement that results in effective schools.

This strategy should be supported by empirical evidence through the analysis of improvement projects in Europe; at least the strategy should be plausible based on the analysis of current practices, especially in the participating countries. The following countries have participated in the project: Belgium, Finland, Greece, Italy, The Netherlands, Portugal, Spain, and England. The contributions contained in this special issue aim to report about the analysis of improvement projects in three of the participating countries and the research team's work in comparative analysis of these improvement projects. The results of the improvement projects in all countries are intended to provide lessons for school improvement. These lessons create input for the further design of a strategy for effective school improvement together with the results of the theoretical analysis.

In the remainder of this contribution, the outline of theoretical analysis, which will result in a theoretical framework, will be presented briefly in the next section, while the framework for the evaluation and the design of the analysis of school improvement projects, will be outlined in the final section.

THEORETICAL ANALYSIS OF EFFECTIVE SCHOOL IMPROVEMENT

The theoretical analysis incorporates seven different points of view: (1) the school effectiveness paradigm; (2) the school improvement paradigm; (3) organisational theories; (4) curriculum theories; (5) behavioural theories; (6)

theories of public choice; and (7) theories of organisational learning and human resources management (Hoeben, 1998; Reezigt, 2000). In the following, perspectives that are important for the integration of school effectiveness and school improvement stemming from the theoretical analysis will briefly be described.

Integration of the Improvement and Effectiveness Paradigms

The primary criterion, or dependent variable to be explained theoretically, is the output criterion from the educational effectiveness tradition. Most effectiveness research defines the output criterion as achievement in basic cognitive skills. A theoretical framework that offers a step forward beyond the state of the art in educational innovation and school effectiveness and towards theoretical explanations of successes and failures, needs to broaden the traditional concept of school and classroom effectiveness from achievement scores in basic school subjects to a new operational definition of educational effectiveness in terms of the realisation of other and more ambitious cognitive and metacognitive goals, such as problem solving, creative thinking, and other higher cognitive skills, transfer of knowledge, and learning to learn.

In contrast to most effectiveness research, which is mainly directed at – operationally defined – basic skills, many innovative efforts in education are deeply concerned with more ambitious kinds of – conceptually indicated – goals (Fullan, 1991). Because other school and classroom factors may be correlated more strongly with basic skills than with higher cognitive skills, this seems to be a central problem in combining both paradigms. The theoretical analysis has to face this issue. Although less outcome oriented, most improvement research implies that other kinds of achievement may be as important or more important than basic cognitive skills. In order to combine the effectiveness and the improvement paradigm successfully, therefore, *the output criterion has to be broadened to include other achievements implying higher order cognitions and metacognitions.*

A theoretical framework also has to deal with the problem of influences of the contexts on effective school improvement. Theories of educational change and school improvement are sensitive to contextual differences. They link them to innovative strategies, but not to educational effectiveness. School effectiveness research has coined a concept of *differential school effectiveness*, and has the methodology to research the problem (Jesson & Gray, 1991; Nuttall, Goldstein, Prosser, & Rashbash, 1989), but has at this moment no theory about different school effects in different contexts (Scheerens, 1993).

Contingency theory, central in the study of organisations, assumes there is no best way to make an organisation effective; which one of several ways to be effective is contingent upon situational and contextual factors (Mintzberg, 1979). A comprehensive theoretical framework of school effectiveness and school improvement may combine these elements to develop hypotheses about contextual differences, innovation strategies, and differential school effectiveness. When these problems are solved sufficiently, the theoretical framework has to find ways to combine the knowledge about “what works”, which is offered by research on educational effectiveness, with the knowledge and experiences needed to change education, which is offered by school improvement.

In the analysis, the structure was used that also forms the basis of the comprehensive model of educational effectiveness (Creemers, 1994). This means the overall multilevel structures with the three levels in addition to the student level: the context level, the school level, and the classroom/teacher level.

The school effectiveness knowledge base makes clear which characteristics or factors are important for effectiveness. Overviews based on theoretical considerations and empirical findings were given by, amongst others, Levine and Lezotte (1990), Creemers (1994), Sammons, Hillman, and Mortimore (1995), Scheerens and Bosker (1997) and Teddlie and Reynolds (2000).

Stoll and Wikeley (1998) make clear that school improvement efforts over the years have become more focused on effectiveness issues such as teaching and learning processes and student outcomes. Although school improvement may concern the school level or the teacher level (for example, school improvement can be directed at the school organisation or at classroom management), its main goal must essentially be stated in terms of student outcomes. It may not be so very important where changes are actually initiated (for example at the level of the central government, or at the level of the individual school). It seems more important whether a school is able to take charge of changes. A school must be ready for changes and show some signs of an ownership mentality.

For school improvement to be successful, the issue of school culture should not be neglected. When the school structure (which is often a sign of school improvement) is changing while the school culture does not change, the danger of short-lived and superficial changes is real. For school improvement to occur, characteristics of the school culture must be favourable. Schools, for example, must have shared goals and feel responsible for success. Other

requirements are collegiality, risk taking, mutual respect and support, openness and an attitude of lifelong learning.

A possible link between school effectiveness and school improvement may occur through the school development planning process. In the description of this process by Stoll and Wikeley (1998), the concepts mentioned above (focus on effectiveness issues, readiness for change, ownership mentality, and a favourable school culture) all have their own place. A new dimension is provided by the four-stage cycle of needs assessment, planning, implementation, and evaluation that underlies all change processes. Attention is drawn to the fact that someone must start this cycle and keep the school going as well during all the stages of the continuous cycle.

Organisational Theories

In organisational theories, three other effectiveness criteria or perspectives are used: (1) *adaptability* or responsiveness to external circumstances or changes; (2) *continuity of the organisation* in terms of stability of the internal structure and acquisition of resources; and (3) *commitment and satisfaction* of the members of the organisation (Fairman & Quinn, 1985). These three perspectives are also inherent in theories of educational change and improvement as supportive conditions (Fullan, 1991). In school effectiveness theories too they are interpreted as supportive conditions and brought into means-goal relationships with the primary criterion of output effectiveness (Scheerens, 1992, 1993). Adaptability and continuity of the school organisation and commitment and satisfaction of its members will be treated as conditions that indirectly support educational effectiveness by stimulating the school organisation and its members to work towards effective school improvement.

Adaptability of the school organisation to change thus may be seen as a necessary condition of effective school improvement. Adaptability is a multi-dimensional core concept of this project. The concept is primarily addressed by change theories (Dalin, 1989; Fullan, 1991, 1992; Sarason, 1982). Adaptability to change will be investigated as a set of conditions that are supportive to the realisation of the students' goals (the primary output criterion of effectiveness). Goal displacement from the primary criterion towards criteria that are interpreted as supportive conditions poses a serious threat of counterproductivity from the point of view of organisational theory. Scheerens' model of the means-goal relationship between these effectiveness criteria will guide this part of the analysis (Scheerens, 1992). The primary productive processes of educational organisations are the *classroom*

processes. A comprehensive theoretical framework of school improvement and school effectiveness, therefore, has to deal with classrooms of students and their teachers, both as people who are subject to changes in the improvement part of a programme and as people who will work toward higher student achievements in the effectiveness part of a programme (Creemers, 1994; Fullan, Bennett, & Rolheiser-Bennett, 1990; Houtveen & Osinga, 1994; Stoll & Fink, 1994). Organisation theories provide *models that link the school organisations to their primary productive processes*. Examples of such models are professional bureaucracies, loosely coupled systems, organisational culture, leadership, commitment and participation of teachers, and high reliability organisations. Most of them link the school organisations to the *teachers* who work as *highly trained professionals* within these organisations. Educational leadership and school culture are divergent examples of factors that feature prominently in both the effectiveness and the improvement paradigms to link teachers and students to the school organisation. However, they feature differently in each paradigm. Organisation theory may provide the elements needed to reconcile the differences (Fullan, 1991; House, 1981; Louis & Miles, 1990; Mintzberg, 1979; Nias, Southwork, & Yeomans, 1989; Rosenholz, 1989; Sarason, 1982; Scheerens, 1992; Schein, 1985; Stoll & Fink, 1994; Stringfield, Bedinger, & Herman, 1995; Stringfield & Slavin, 1992; Weick, 1976).

Curriculum Theories

Curriculum theories provide other models that link the school as an organisation to the work of teachers. Curricula are documents that should or might be used in educational practice: They could be formulated as guidelines at the national level for education in schools and classrooms, but usually curricula are the textbooks for students and teachers. Curriculum theories deal with the characteristics of curricula in relation to the implementation of curricula and the outcomes in student achievement. Examples are *curriculum implementation strategies*, such as the fidelity perspective, the mutual adaptation perspective, or strategies of curriculum enactment; other examples are *models of control*, varying from central control – the central office of the school or even the central government – to models of empowerment of teachers (Fullan, 1991; Fullan & Pomfret, 1977; Simons, 1990; Snyder, Bolin, & Zumwalt, 1992). Recently, curriculum theory was also integrated with a theoretical framework of school effectiveness (Hoeben, 1994). Incorporation of organisation theory and curriculum theory in the framework may provide a

better understanding of how the primary processes and the organisational processes work with each other.

Behavioural Theories

Schools do not change if the people within the schools, particularly the teaching staff, do not change. In the analysis not only theoretical models that link the organisation to the work of teachers and to the primary processes are needed, but also theories and models of behaviour change and behaviour modification of individuals may be used in analysing the problem of (resistance to) change towards a more effective school: "In the final analysis it is the actions of the individuals that count" (Fullan, 1991, p. 77). Behavioural theories in (social) psychology explain work towards changes in behaviour by stressing the *mechanisms of evaluation, feedback and reinforcement* (Carver & Sergiovanni, 1969; Debus & Schroiff, 1986). These mechanisms work in explaining and improving effective instruction in classrooms (Creemers, 1994) and in explaining and improving the impact of curricula on achievement (Hoebe, 1994). Rational control of organisations that depend on monitoring, evaluation, and appraisal of the functioning of the (people within) organisations, also comes close to the findings of school effectiveness research which consistently demonstrates that evaluation and assessment are associated with high achievement (Scheerens, 1994). Many of the problems of individual change of teachers described by Fullan (1991) are pertinent to this part of the analysis.

Theories of Public Choice

Public or collective choice theories describe collective processes in terms of exchange mechanisms and responsiveness. Public choices are compared with individual choices (ideally the rational choices of individual consumers in a free market) and with interactive choices (ideally the optimal choices of game theory in bargaining situations). Public choice theories deal with political processes of choice, with power (distribution), with agendas of the powerful, with planning processes and with the consequences of these different processes in terms of the distribution of welfare, income, (human) rights and, of course, education (Hargreaves Heap, Hollis, Lyons, Sugden, & Weale, 1992).

Choice is seen as a decentralised and market-oriented alternative to bureaucratic controls that frequently result in imperfect exchanges and insufficient responses. Lack of sufficient incentives to operate efficiently and effectively, the masking of the true input-output characteristics, goal displacement,

and the striving for budget maximisation are examples of factors with which public choice theory explains the frequent occurrence of inefficiency and ineffectiveness in public sector organisations, such as schools, sometimes even debauching into purposefully counterproductive behaviour (Chubb & Moe, 1990; Scheerens, 1993, 1994). On the other hand, a case may be made of counterproductive misuses of school effectiveness research as a result of choices made by policy makers (Brown, Duffield, & Riddell, 1995; Myers & Goldstein, 1997). Theories of educational change and innovation may be interpreted as efforts to render such counterproductive factors harmless (Fullan, 1991).

Organisational Learning Theories

The problem of organisational learning within schools has to be solved for the theoretical analysis to make significant steps beyond the state-of-the-art school reform and improvement (Louis, 1994). Organisational learning is involved in all processes of adaptation to a changing environment, and in processes of purposeful change to improve a school's effectiveness. *Learning of educational organisations* may be conceptualised by information richness, organisational procedures of processing and interpreting information, procedures for evaluation and monitoring, interpersonal networks of sharing and discussing information and organisations as makers of meaning by incremental adaptation, intellectual learning style and assumption sharing (Daft & Huber, 1987; Lundberg, 1989; Senge, 1990). Organisational learning may be studied by analysing human resources management, in-company training strategies, and by studying the claims of companies that call themselves "learning organisations." A special point of view is provided by the realisation that the productive work in educational organisations is being done by highly trained professionals with a high degree of autonomy; this is consistent with the view that organisational learning requires considerable decentralisation (Fullan et al., 1990; Louis, 1994). Learning by educational organisations may be studied specifically by analysing their evaluation and monitoring and their staff development: that is, the ways they determine their training needs and the ways they organise the training of their personnel (in-service training, apprenticeships, embedded learning). An analysis of strategies related to "learning to learn" in "rich learning environments," with a focus on "learning from experience" and "learning from practice" may also provide insight by analogy into the learning of educational organisations: such learning strategies are part of teachers' professional body

of knowledge and they may apply them to problems of learning and adaptation of their school. In the analysis, the theories mentioned will be related to each other and especially to a starting framework comprising school effectiveness and school improvement. It is expected that through this analysis, comparisons and relation to an initial theoretical framework can result in important factors for effective school improvement to be included in a more elaborate model. This model will be combined with the results of the empirical part of the study: the evolution and analysis of school improvement efforts.

THE EVALUATION OF EFFECTIVE SCHOOL IMPROVEMENT PROJECTS

Inventory of Projects

Comprehensive overviews of programmes that link educational effectiveness and school improvement are available in the contributions to the annual meetings of the *International Congress for School Effectiveness and Improvement (ICSEI)*. The first congress was held in the United Kingdom (London, 1988) (Reynolds, Creemers, & Peters, 1989). Since a conference has been held each year in another part of the world, many contributions focus on experiences in innovative programmes combining improvement and effectiveness (for recent examples worldwide, see Townsend, Clarke, & Ainscow, 1999). Case studies include Stoll et al. (1996), Houtveen and Osinga (1994), Stoll and Fink (1992), Stringfield et al. (1995) and Townsend (1995). Because ICSEI is not represented in the participating countries equally, the first step has been an inventory of possible projects for further analysis. The selection and description of these projects needed a system that guarantees that in the analysis of the project, the required information would be available. Therefore, a framework for the evaluation indicating the necessary information was developed, which is applied to the description of the projects (see next section). The framework for evaluation indicated what kind of information was needed to evaluate and analyse the improvement project. When this information was not available on an existing project, the country teams were expected to gather further evidence and further information. Where there was insufficient information available, it was sometimes decided not to elect the specific school improvement project. After an initial presentation of possible projects to evaluate, the country teams made a final selection of projects with at least one from secondary education, preferably more, based on

the size of the project. Sometimes the school improvement project would be just one school, but more often schools, as units of change, were part of a larger school improvement project together with other schools. To guide the further data collection and the analysis of the school improvement projects, a list of questions was derived from the original evaluation framework (see section on selection, data collection, and analysis).

The Framework for the Evaluation Study

The framework we used consists of main components based on the analysis of theoretical orientations and a conceptual analysis of effective school improvement. Each of the main components is specified in separate variables that might or might not be empirically observed.

The main components are related to:

- the outcomes of effective school improvement;
- the processes of effective improvement;
- the outer layers of the school;
- the (macro)context.

Outcomes

The **goals in terms of pupil outcomes** provide the effectiveness criteria of success or failure. Bearing this in mind, it is important to make distinctions in different domains – cognitive, social, affective, higher order, and especially between raw outcomes and added value.

The **goals in terms of intermediate outcomes** provide the improvement criterion of success or failure. Intermediate outcomes are defined as the outcomes of the change and improvement processes. They may consist of:

- teacher behaviour;
- school characteristics;
- school member satisfaction;
- parental involvement.

Processes

Compared to all kinds of improvement strategies or plans that are imposed and controlled from outside or even from top down, a self-regulative approach is considered far superior in bringing about effective school improvement. In a self-regulative approach, the school and the school's principal and/or teaching staff directs, plans, and controls its own improvement processes and, if

necessary, modifies the planning in order to attain the targeted improvement goals. Further, in a self-regulatory improvement process the requirements of consistency, cohesion, constancy, and control can be met (Creemers, 1994).

The self-regulative approach was dealt with in two ways. The classroom curriculum is the traditional, self-regulative, subsystem of the school with which principal and staff have experience, and which they implement as a matter of course in their day-to-day teaching tasks, in order to attain pupil goals. Improvement activities may also be organised in a self-regulative cycle. Making use of and extending their everyday experience with self-regulation in the classroom curriculum, principals and teachers may organise and implement the more particular self-regulative cycle of improvement itself, in order to attain goals of improving their own behaviour and improving school policies. In as far as school improvement implies the change and improvement of behaviour of all members of the school, the self-regulative improvement cycle takes place at the level of the individuals concerned.

In the (implementation of the) **classroom curriculum** elements are implied such as:

- the goal and reward structure for pupils;
- implementation of the curriculum as a feedback system; and
- use of textbooks.

The **self-regulative cycle of improvement** includes the planning, as well as the implementation processes, of improvement. The cycle might consist of elements such as:

- planning of the improvement processes;
- decisions as to who is responsible for the reinforcement;
- implementation of the planned improvement processes; and
- evaluation of attained changes.

The Outer Layers of the School

At the **school level**, components were identified that operated as outer layers to the core processes of the classroom curriculum and the improvement cycle. The components are the following: the school curriculum, the school organisation, parental choice and involvement, organisational learning, and the position of external change agents in the school processes of change.

The **school curriculum** includes elements such as:

- educational goals;
- educational content;

- evaluation policy/system;
- rules and agreements about how to implement the school curriculum; and
- sufficient control of the instruction by teachers and in classrooms.

The school as organisation concerns elements such as:

- school culture inducing effectiveness;
- staff commitment;
- school adaptability to changes in external or internal circumstances;
- authority structure in the school organisation; and
- management of the school organisation.

Parental choice and involvement stimulate the school's responsiveness to the needs of pupils, parents, and the broader community. Parental choice concerns other aspects than parental involvement. Whether or not parental choice is observed, can be decided by answering questions such as:

- Are parents allowed to choose a school for their children?
- Have parental school choices financial consequences and, if so, which consequences?

Whether or not parental involvement may be observed is decided with the answers to questions such as:

- Are parents involved in the school's activities?
- Do parents feel a commitment to the school?

Factors of organisational learning particularly stimulate the management of change: that is, the attainment of intermediate outcomes. Like all learning, organisational learning takes place in a self-regulative learning cycle. The learning of the school organisation is particularly concerned with the management and the further development of human resources in the school.

The self-regulative learning cycle in the school concerns, for example:

- learning targets; and
- evaluation, feedback, and reinforcement mechanisms.

Human resources management in the school concerns, for example:

- the setting of the learning targets for the staff; and
- the organisation of the professional development of the staff.

The **position of change agents** in the improvement processes of, or within, the school has the following aspects:

- the involvement of external change agents in the process of ESI;
- the institutional background of the change agents; and
- structural position of the external change agents in the school's ESI processes.

The Macrocontext

Components of the macrocontext impact the degree of autonomy of schools and the professional autonomy of teachers. In very decentralised educational systems, the schools and the teachers are free to improve themselves when they want to; the only barriers to effective school improvement are likely to be those which the schools and teachers erect themselves. In very centralised educational systems, the macrocomponents themselves may operate also as barriers to the improvement of individual schools. The schools and teachers themselves may also erect barriers to effective school improvement; therefore serious doubts remain whether centralised systems are really able to stimulate collective improvement of the schools. Some systems have both centralised and decentralised elements. So far, the macrocomponents may be regarded as setting the stage for what is possible in improvement processes of the individual schools.

The macrocomponents are components of the national educational system. They particularly concern:

- the organisation of the national educational system as such;
- the organisation of effective school improvement within the system;
- the organisation of the teaching profession; and
- the organisation of the curriculum in the system.

Selection, Data Collection, and Analysis

In the selection of the school improvement projects for the analysis, it emerged that there were big differences between improvement projects within the ESI project (for more detail see Stoll, Wikeley, & Reezigt, 2002), for example with respect to:

- the available information regarding the improvement project, and especially the processes in the school, the classroom and the student results;
- goals of the improvement programmes, especially student results or intermediate goals;
- the scale of the programme, macro and/or micro;
- the improvement technology used;

- the theoretical orientation of improvement projects;
- the theoretical notions related to the goals of improvement; and
- the number of schools and students involved in the study.

However, the improvement programmes in the different countries all have some common characteristics, such as:

- all have the school as the target for improvement and, therefore, as the unit of analysis;
- ultimately they all intend to change, or improve, student outcomes;
- all have intermediate goals at the level of the teacher, the curriculum, the school organisation, and so on, in order to achieve the ultimate goals; and
- (according to the guidelines for selection) there is information available about the process.

As it turned out, it was not very practical to work with all the components and elements as specified in the framework for evaluation described in the framework section – at least not for the presentation of the projects and a first analysis. Therefore, it was decided to reduce the framework to 11 key questions with 7 additional related questions. In the further analysis of the projects, however, and for the design of an effective school improvement strategy, the framework will be applied.

The key questions are the following:

1. To what extent do the student outcomes provide evidence for the school's effectiveness in attaining its goals?
2. To what extent do the intermediate outcomes provide evidence for the attainment of the school's improvement goals?
3. To what extent do the students show increased engagement with their own learning and their learning environment?
4. To what extent does the curriculum in the classrooms contribute to the school's attainment of students' goals?
5. To what extent does the cycle of improvement planning, implementation, evaluation and feedback contribute to the school's attainment of its improvement goals?
6. To what extent does the school's curriculum – where applicable – contribute to the effectiveness of the classroom curriculum?
7. To what extent does the school's organisation contribute to the attainment of intermediate improvement goals and students' goals?

8. To what extent does parental choice and involvement contribute to the school's responsiveness and to its attainment of intermediate improvement goals and students' goals?
9. To what extent does the learning by the school organisation contribute to the school's management of change, that is to the attainment of the intermediate improvement goals?
10. To what extent do external change agents contribute to the school's attainment of intermediate improvement goals?
11. To what extent do the contextual characteristics allow for, stimulate, or hinder ESI, that is the attainment of intermediate improvement goals and of the students' goals? For instance: To what extent does the national curriculum, where applicable, allow for, stimulate, or hinder ESI?

The seven additional questions for the analysis of the improvement projects are:

1. Is evidence available as to what extent the attainment of the improvement goals does in fact contribute to the attainment of students' goals?
2. Is evidence available as to what extent the attainment of the improvement goals does in fact contribute to the better implementation of the classroom curriculum?
3. Is evidence available as to what extent particular ways of implementing the self-regulative cycle of improvement – that is particular improvement technologies – contribute more to the attainment of improvement goals than other ways of implementation?
4. Is evidence available as to what extent the school's responsiveness contributes to a more successful attainment of improvement goals?
5. Is evidence available as to what extent a history of organisational learning contributes to more successful attainment of the improvement goals?
6. Is there evidence that the school could not have managed its own improvement processes without assistance from external change agents?
7. Is evidence available as to what extent goals contribute to the attainment of intermediate improvement goals and to the attainment of students' goals at the national or societal level in a national curriculum, a national improvement strategy, or otherwise?

To guide the analysis and evaluation of each other's improvement programmes, the English team who co-ordinated this part of the project started to develop rating scales which are outlined in the contributions of Stoll et al.

to this special issue. At present, descriptions and their results are available of improvement projects in primary and secondary schools in different participating countries in Europe (De Jong, 2000). The improvement projects are analysed and discussed and this will be the input for the further development of an effective school improvement strategy, which will be combined with the results of further theoretical analysis.

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